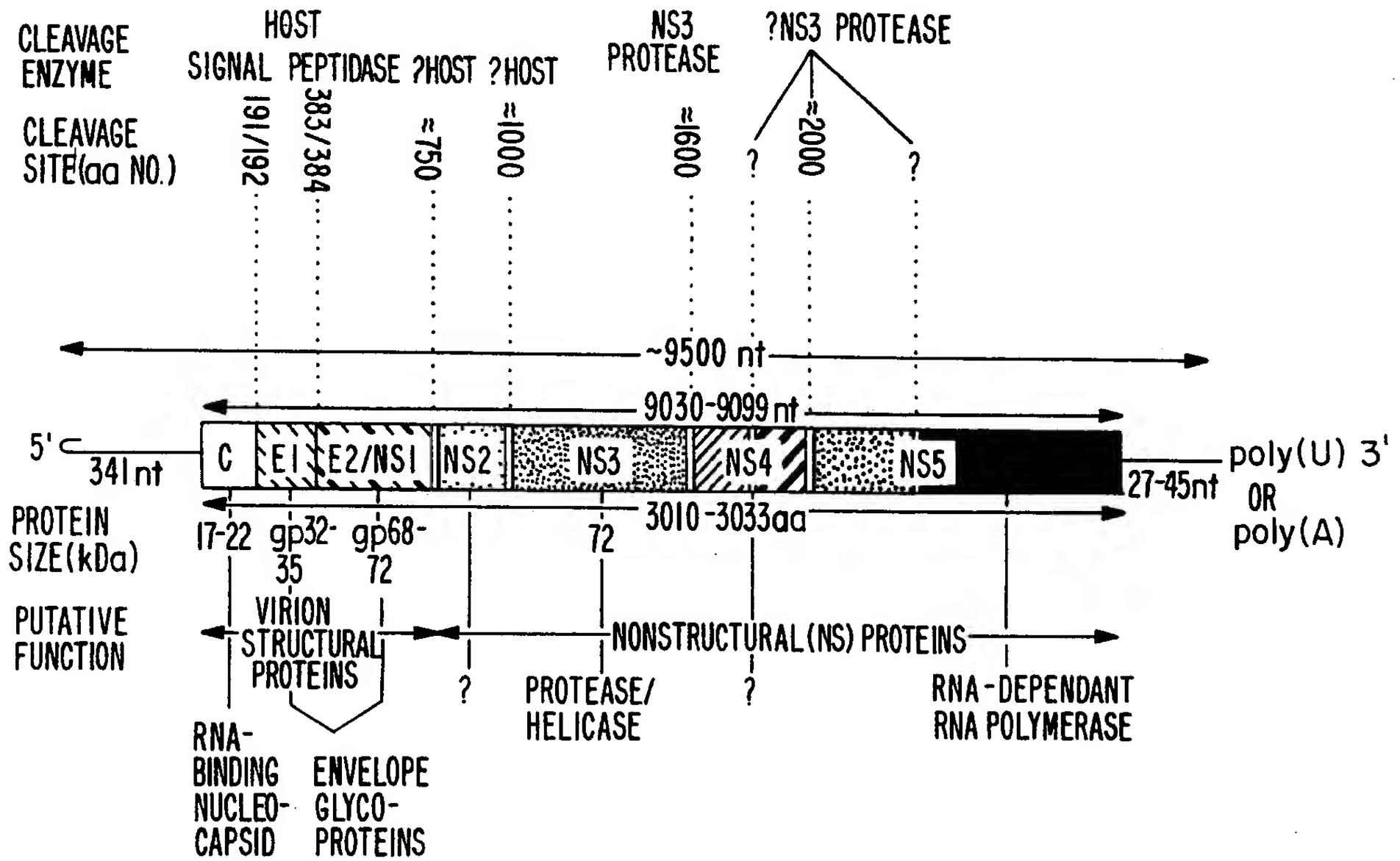

FIG.1

Consensus	.T.VTGG.AARTT.G..SLF..G.SQ.IQLI	31
re3 (15-45)	A.YA..AAQGHA.NSFV...RS.A..NLK.V	45
hcj7.pep (15-45)	S.Q....Q..H.VR.VA.I.SP.SR.D.S..	45
ny1.pep (15-45)	S.R....QQG.AVH.IA...SL.A..K...V	45
GE11.2 (15-45)	S.H.M.AQQG.VAK.FT...GP.PA.K....	45
s71957.p (15-45)	S.H...AVQGHSIR.LT...TS.PA.K...V	45
ec10 (15-45)	E.H....I..K..ASLTG..NL.AK.N....	45
sp2.tc (15-45)	E.H....N.G.AAA.IAG..TL.AK.NV...	45
M2.2 (15-45)	Q.R....T..QS.ARIAG..SL.AR.N....	45
rela (15-45)	Q.H.M..T.G.NAY.LT.FLSV.A..K....	45
168 (15-45)	E.H.M..A.SS..YRFA...TS.PA.K...V	45
M1.5 (15-45)	E.H....S..S..ATFSK..MP.A..N....	45
hpcprc1a.p1 (14-44)	G.TRV..A.....SSFA..LTH.P..N...V	44
gm2.tc (15-45)	G.H....A...DAFRFS...TR.P..N....	45
s71864.p1 (15-45)	A.NM...AP....YKLTT..SY.A..K....	45
i15.tc (15-45)	HNH....TS..N.F.ITT..TQ.P..KL..V	45
sp1.tc (15-45)	G.H....A...NAHSLT..LAP.A..K....	45
re37b (15-45)	T.R.S..T..H..A.LT...SP.PR.N.H.V	45
re39 (15-45)	T.H.S..T.G...ASLT.F.AP.A..R...V	45
hpchcj2.p (15-45)	T.H....ATGH..S.IA...LP.A..K....	45
hpccgenom.p1 (15-45)	D.YAS..AQG.S.L.FT...TP.A..K....	45
hpcprc4a.p2 (14-44)	D.YAS..A.G.A.Y.IT...AP.A..N....	44
hpcprc11a.p1 (4-34)	R.YAS..A.G...H.FT...ST.AR.N....	34
re72b (15-45)	Q.Y....K..Q.VS.FTG..SS.P..K....	45
hpcprc3a.p1 (4-34)	D.Y.S..A...SIS.FT...TP.A..K...V	34
re70 (15-45)	S.Y....E.S...R.FA...TL.S..K....	45
re42 (15-45)	N.Y....S.G.AVA.FAG.LQP.AK.NV...	45
63 (15-45)	H.R....QV.FR.H.LV...TQ.P..K...V	45
hcvj (15-45)	H.H....RV.SS.QSLV.WLSQ.P..K...V	45
hcvj1 (15-45)	H.R....VQGHV.STLT...RP.A..K...V	45
re38 (15-45)	N.R....VQG.D.S.LV...SL.P..K...V	45
bk (15-45)	D.H....AQ.K..NRLV.M.AS.P..K....	45
re5 (15-45)	E.H....AS....QRFT.F.DL.P..K...V	45
re35 (15-45)	T.YM...AN....Q.FV...TP.PA.K...V	45
re36 (15-45)	E.H....TS....Q.FV...SA.A..K...V	45
re54 (15-45)	G.H....Q.....QSFT...SP.PQ.K....	45
re56 (15-45)	R.H....K..H..K.FA...TP.P..N....	45
64 (15-45)	E.R...AVQGHGAL.LA...TP.P..K....	45
re62 (15-45)	E.R...AI.G..ASSFAG..TS.A..K...V	45
re41 (15-45)	E.R...QQVG...QSLT...TP.P..T....	45
hpcvjk3.p (15-45)	Q.R...AQVG...SSLT...TP.P..N...V	45
jk2 (15-45)	R.Q...AQ.GH..S.LA...TP.P..K...V	45
hcv1 (15-45)	E.H....S.GH.VS.FV..LAP.AK.NV...	45
us5.tc (15-45)	E.H....S.GH.VT.IA...TS.AK.N....	45

FIG. 2A

```
i21.tc  (15-45)          S.H....T..H.VA.FS...TV.PK.N....    45
M3.1  (15-45)            E.H....A..Y.AA.LA...TS.AK.N....    45
H77  (15-45)             E.H....S.G...A.LVG.LTP.AK.N....    45
re43  (15-45)            G.H....S.G.A.A.IAG.LTP.AR.N...V    45
Ge6.3  (15-45)           K.H....S.....S.IA..LTP.AK.NV...    45
C011  (15-45)            K.Y....SQ.QA.F.FT..LQQ.AK.N....    45
TH  (15-45)              E.T....S..HGAL.IA...NQ.AR.N....    45
0115  (15-45)            E.Y....AS..S.FTLVG..KQ.SQ.N...V    45
re4a  (15-45)            Q.Y.S..SSG...S.LV.I.SP.A..NL...    45
q1  (15-45)              E.Y.S..A..Q..ARFAGF.QS.AK.N....    45
q3  (15-45)              E.Y.S..S..Q..A.FVR..ET.PK.N....    45
gh1.tc  (15-45)          S.Y.S..AQ..AAQ.IT...SR.S..K...V    45
M4.1  (15-45)            S.Y....TQG.AAS.LT...SA.A..N....    45
nac5.tc  (15-45)         N.Y.S..T.GH.GH.LTA..SP.A..N....    45
hpcgenanti.p3  (15-45)   S.I.S..TV....HSLA...TQ.A..K....    45
hcj4  (15-45)            E.YTS..A.SH..STLA...SP.A..R...V    45
hpchcv.p2  (15-45)       H.LT...H...L.S.FAG..TP.P..R....    45
hcj1  (15-45)            E.I.S..Q...AMS.LV...TP.AK.N....    45
hct18  (15-45)           E.YTS..N.GH.MT.IVRF.AP.PK.NVH..    45
hct27  (15-45)           T.YT...N.....QALT.F.SP.AK.D....    45
hcve1  (15-45)           E.YT...ST....Q.LV...SR.AK.D....    45
ge12  (15-45)            A.YTS..S.....Q.FA...SL.SQ.K...V    45
LG  (15-45)              A.YT...SV....H.FS...SQ.AK.N....    45
jt.p3.x  (15-45)         V.YT...SQ..H.QSVT.F.TQ.PA.R....    45
us4.tc  (15-45)          H.YT...TV..S.Q.LVGFLSP.P..N....    45
jk1  (15-45)             T.Y.SV.H.SQ..RRVA.F.SP.SA.K...V    45
hpcvjk4.p  (15-45)       T.T.S..H.SQI.R.VT.F.SP.SA.K...V    45
hpce2cor.p  (15-45)      K.SL..VTR..AAARLTA..SS.P..R....    45
hpcns34d.p  (15-45)      G.SL...AR..AAS.LAG..SS.P..R....    45
FT0.1  (15-45)           V.Q.SPPQ.GY..SVLTGILSP.AK.N...V    45
Gj6.1  (15-45)           V.Q.S..Q.GY..SVLTGILSP.AK.N...V    45
re7  (15-45)             G.YTV..AS.F..SRLT...AL.P..R...V    45
hcvkf  (16-46)           N.HTV..TEGFA.QRLT...AL.P..K....    46
arg2.tc  (15-45)         S.RTA..AQ.FN.Y.VA.I.SP.P..R...V    45
hcj6  (15-45)            Q.HTV..ST.HNARTLTGM.SL.AR.K....    45
hpchcj5.p  (15-45)       N.RTVA.S..A..R.FT.M.SS.SK.NL...    45
rs1.pep  (15-45)         Q.RTV..QVGHSVR.FT...SA.SA.N....    45
re71  (15-45)            E.HT..AVSGH..NVLT...SS.S..N....    45
re6  (15-45)             V.RT..EV....ANTFA...TT.P..N..I.    45
hcj8.pep  (15-45)        T.YSS.QE.G..VA.FAG..TT.AK.NLY..    45
re40  (15-45)            S.S.V..RQ.SA.FRFT.F.SR.PT.E.K..    45
hpcencr.p  (15-45)       N.YT.A.SM.QSIYRLTDI.ST.P..KL..V    45
re55b  (15-45)           R.ILMA.RQ.EV.QSFPG..SLAP..K.H..    45
aus1.tc  (15-45)         D.YA...SV.SIMA.IARF.SP.AR.D....    45
PC2.1  (15-44)           E.YA..AS.GHDVSSFAR..AP.AR.N...-    44
hct23  (15-45)           E.HR...S...S.A.VA...TP.AR.N....    45
re34  (15-45)            N.RAV.MVQS...YALT...DS.AA.KL..V    45
```

FIG. 2B

Hutchinson	Strains: 395 407		
H77	^{384}ETHVTGGSAGRTTAGLVGLLTPGAKQNIQLI^{41}		1977
H90	----------SVL-IASF--R-P-------		1990
HC-J4	Strains: 395 407		
HPCJ483	^{384}ETYTSGGAASHTTSTLASLFSPGASQRIQLV^{414}		1983
J48711	A------V------RFT----S--------		
J48712	A-----AV------RFT-F--S--------		
J48713	A-----AV------RFT----S--------		1987
J48714	A-----AV------GFT----S--------		
J48715	------RV-G----GFT----S--------		
HPCJ491	A------V-GR---GFT----S----K----		
J49120	--H-T-RV-G----RFT----S----K---		
J49121	--H-T-RVVG----GFT----S----K---		1991
J49122	--H-T-RV-GR---GFT----S----K---		
J49126	T------V-GR---GFT----S----K---		
J49127	K-----------RFT-----------		
NY	Strains: 395 407		
NY1.1	^{384}STRVTGGQQGRAVHGIASLFSLGASQKIQLV^{414}	t_0	
NY1.2	----------Q-F----R-----E----		
NY1.3	----------N---		
NY2.1	----------H-A-SLT---R-----N----	6mo	
NY2.2	----------H-A-SLT---R-----N----		
NY3.1	N------R----A-SLT----P----N----		
NY3.2	N------R----A-SLT----P----N----	-8mo	
NY3.3	G------R----A-SLT----P---EN-R--		
NY3.4	----S-------A-SLT---T-----N----		
NY3.5	--H---AL----AY--T-FL-H-P-------		
NY4.1	--Q-M-------AYSL---L-P--N------		
NY4.2	--Q-M-------AYSL---LGP---------	14mo	
NY4.3	--Q-M-------AYSL---L-P---------		
RS	Strains: 395 407		
RS1.1.	^{384}RTRTVGGQVGHSVRGFTSLFSAGSAQNIQLI^{414}	t_0	
RS1.2.	Q----------		
RS1.3.	Q----------D----		
RS2.4.	Q----------L----------	2mo	
RS3.1.	Q----------L----------	6mo	
RS4.1.	Q-------M--G---L---------R-----		
RS4.2.	Q-H-----M--G---L----------	8mo	
RS5.1.	Q-H-----M--G---L-N----------	11mo	

FIG. 3

Amino Acid Position:

FIG. 4

*	$#	*	##	##	##	#	‡	‡	##	‡	@	#	*	*@	##	#	#	##	##	@	@	$#	##
384	385	386	387	388	389	390	391	392	393	394	395	396	397	398	399	400	401	402	403	404	405	406	407

% Conserved AA Character for Each AA Position:

49	99	58	100	100	100	97	73	77	100	75	90	100	63	89	100	99	93	100	100	87	87	100	100

Legend

#$	99-100% identical amino acids (invariantly conserved)
##	100% conserved amino acid substitutions (invariantly conserved)
#	90-99% conserved amino acid substitutions
@	80-89% conserved amino acid substitutions
‡	70-79% conserved amino acid substitutions
*	49-69% conserved amino acid substitutions (highly variable)
*@	position with the least conserved amino acid substitutions in temporarily sequential time points in individual patients (Figure 3).

Notes:

Positions 403 (F,L), 406 (G,A) and 407 (A,P,S) utilize only 2 or 3 amino acids of homologous character, respectively.

Position 394 represents the only strongly conserved basic amino acid, all others conserved for hydrophobic character and/or size in the case of amino acid position 407.

Position 398 appears to be least conserved between AA 395-407 in sequentially temporal HCV isolates in individual patients (see Fig. 3).

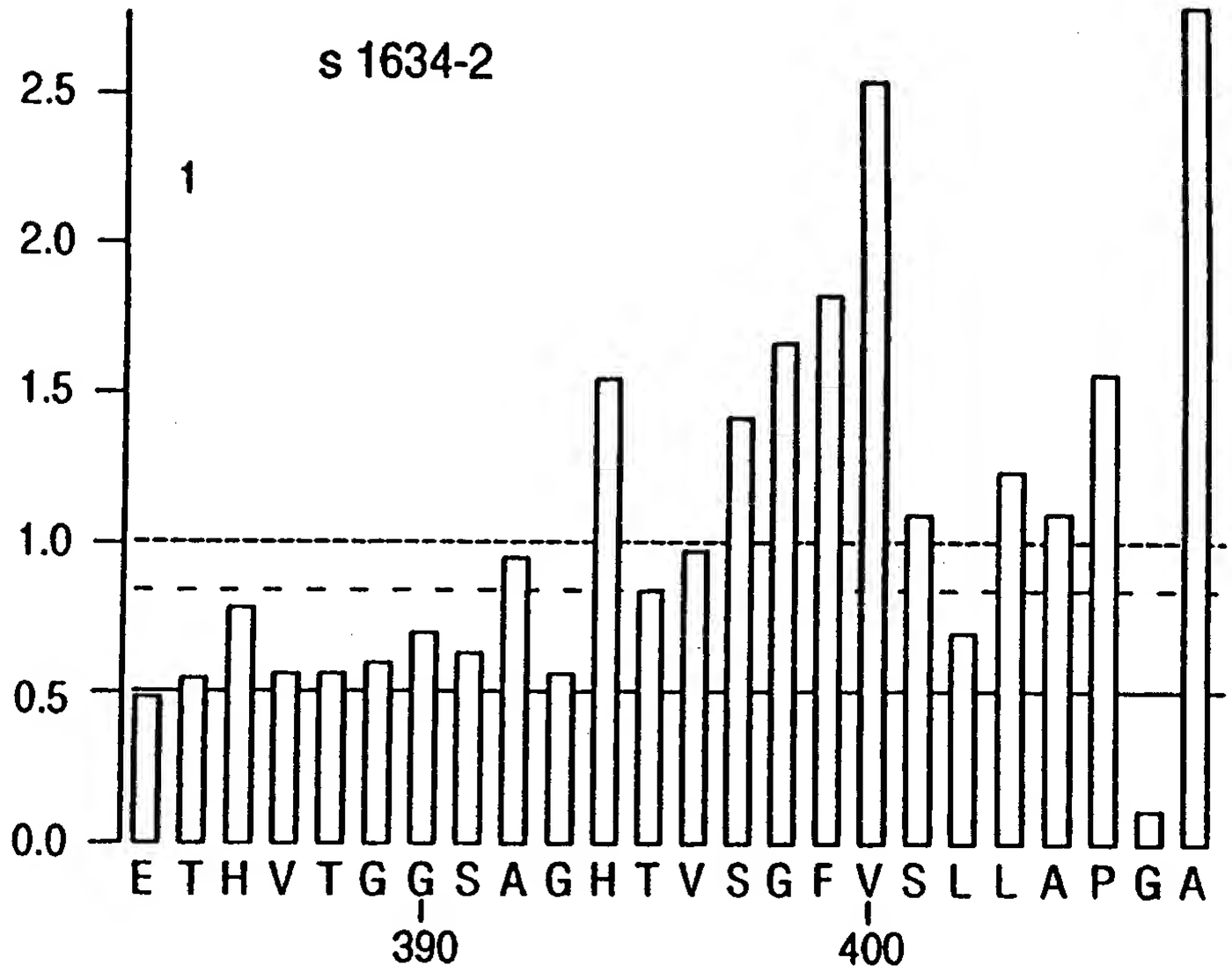

FIG.5A

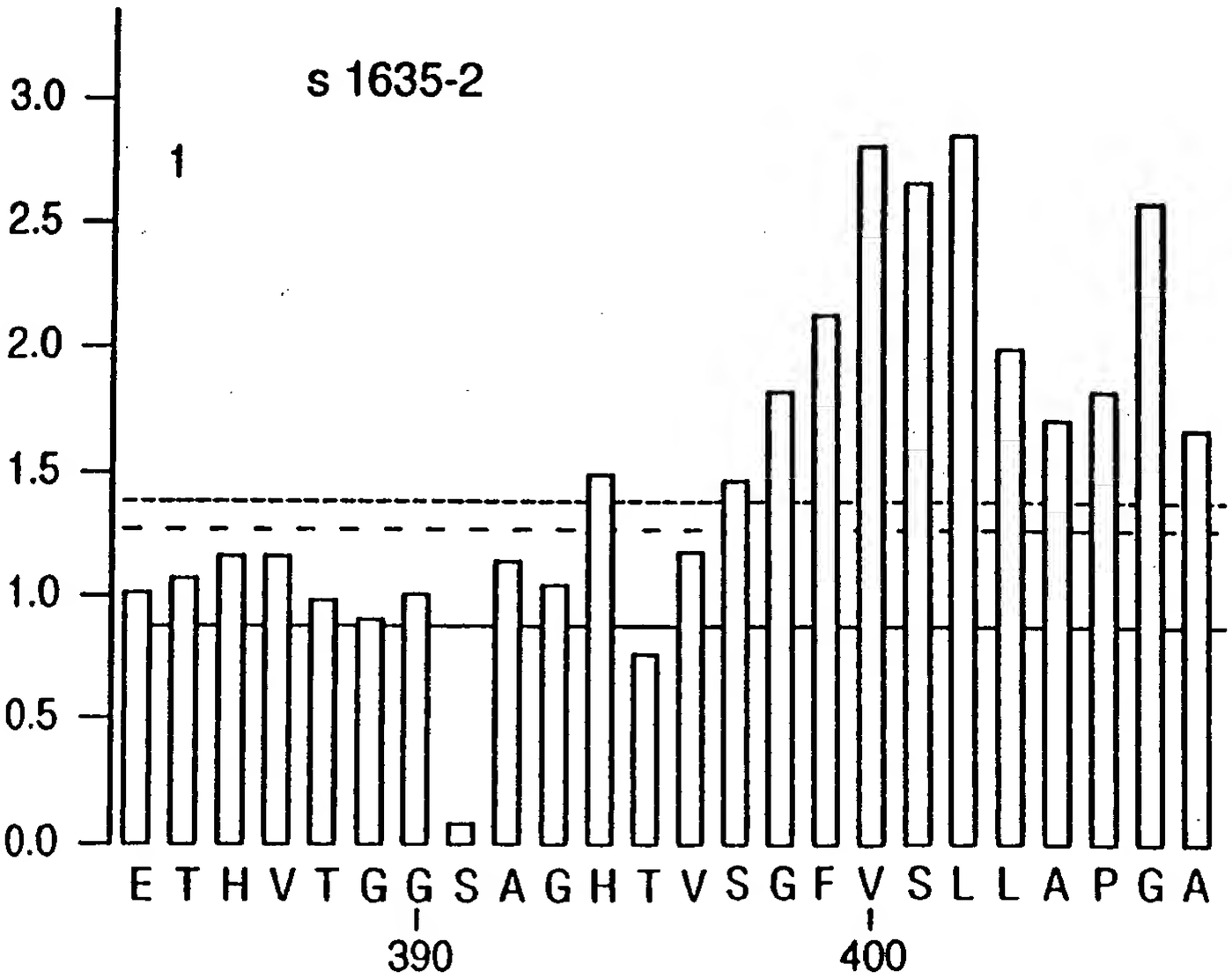

FIG.5B

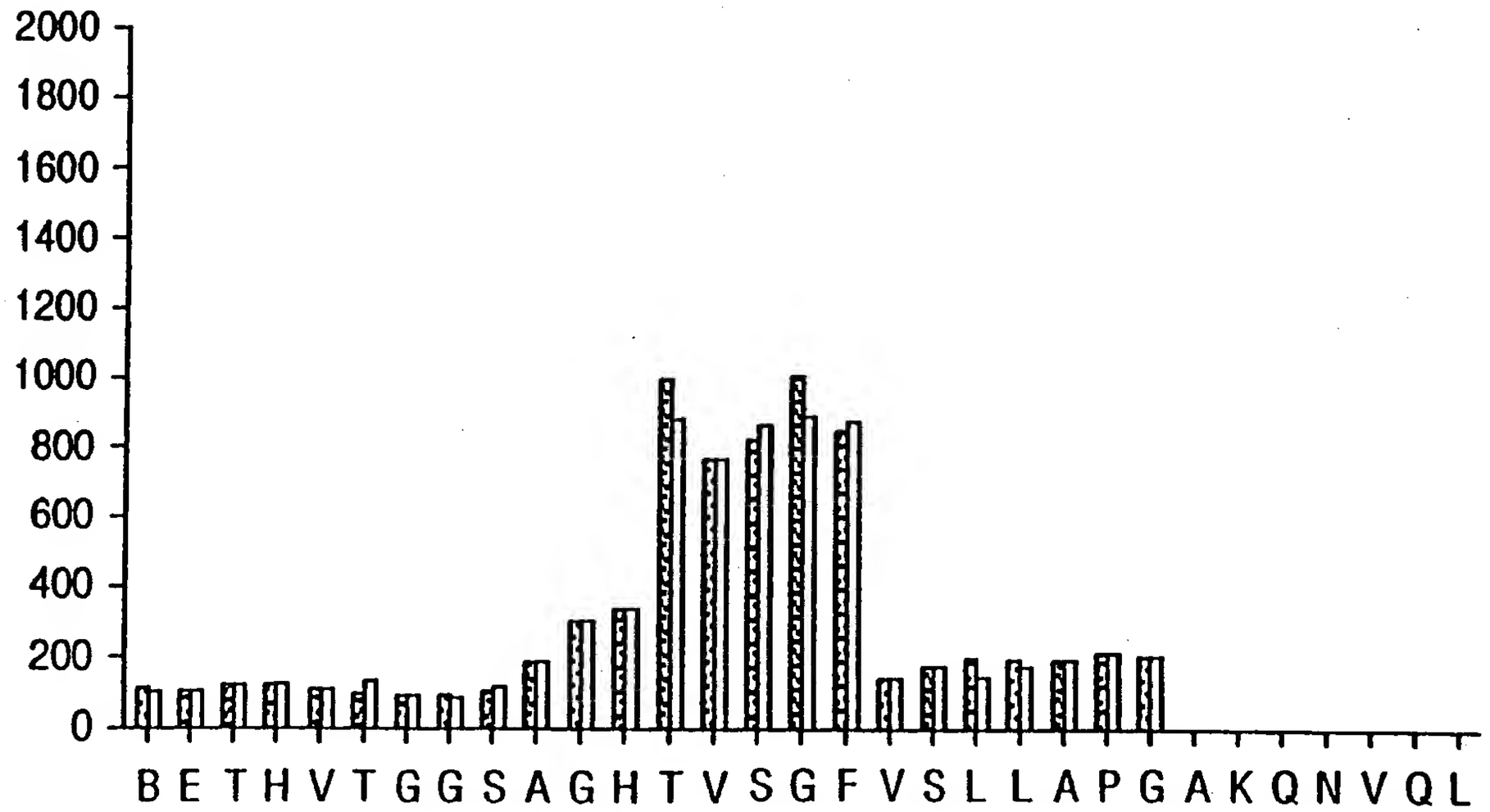

FIG.6

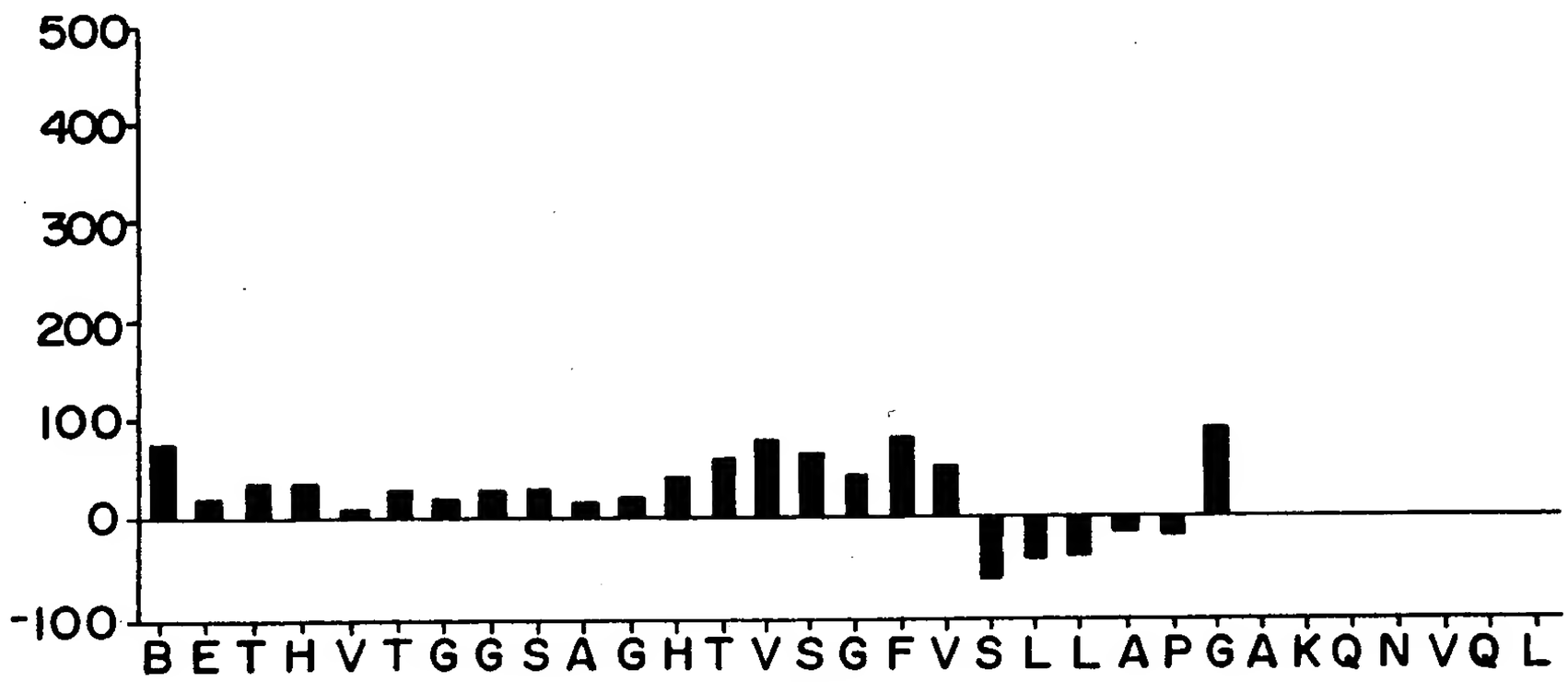

FIG.7A

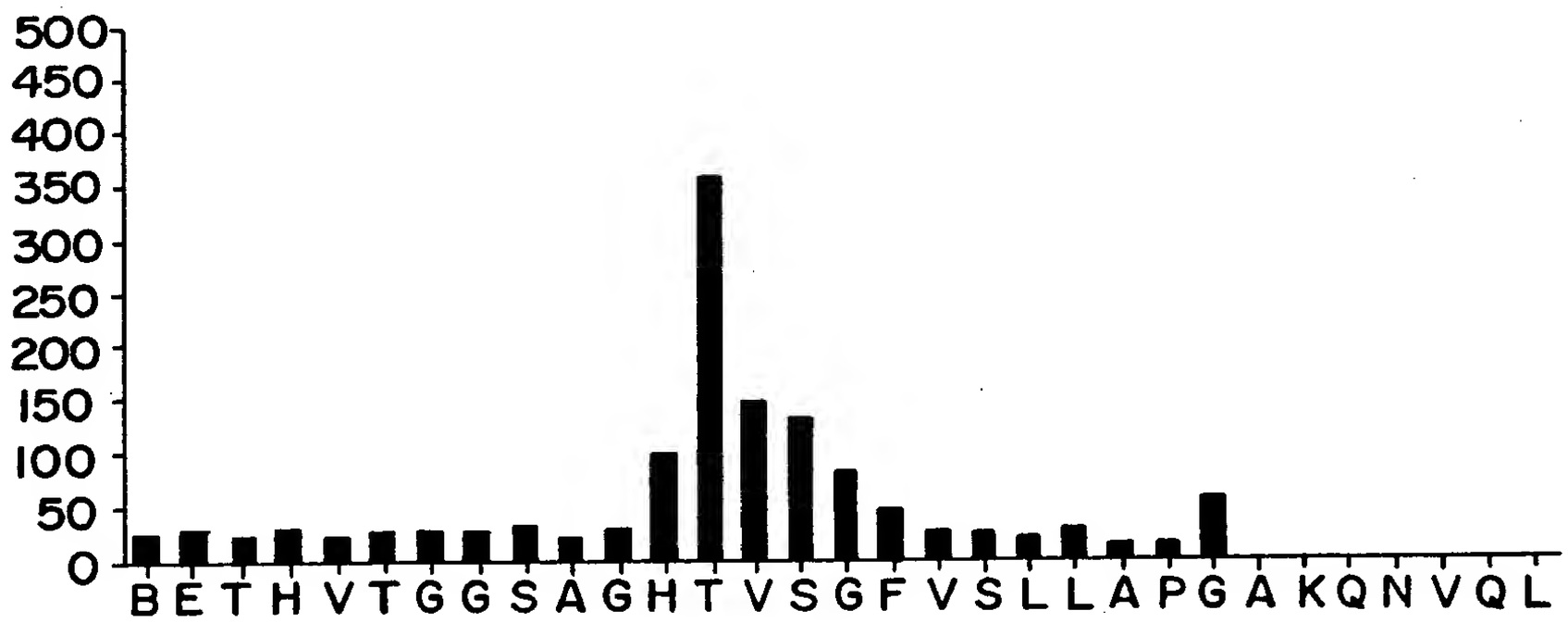

FIG.7B

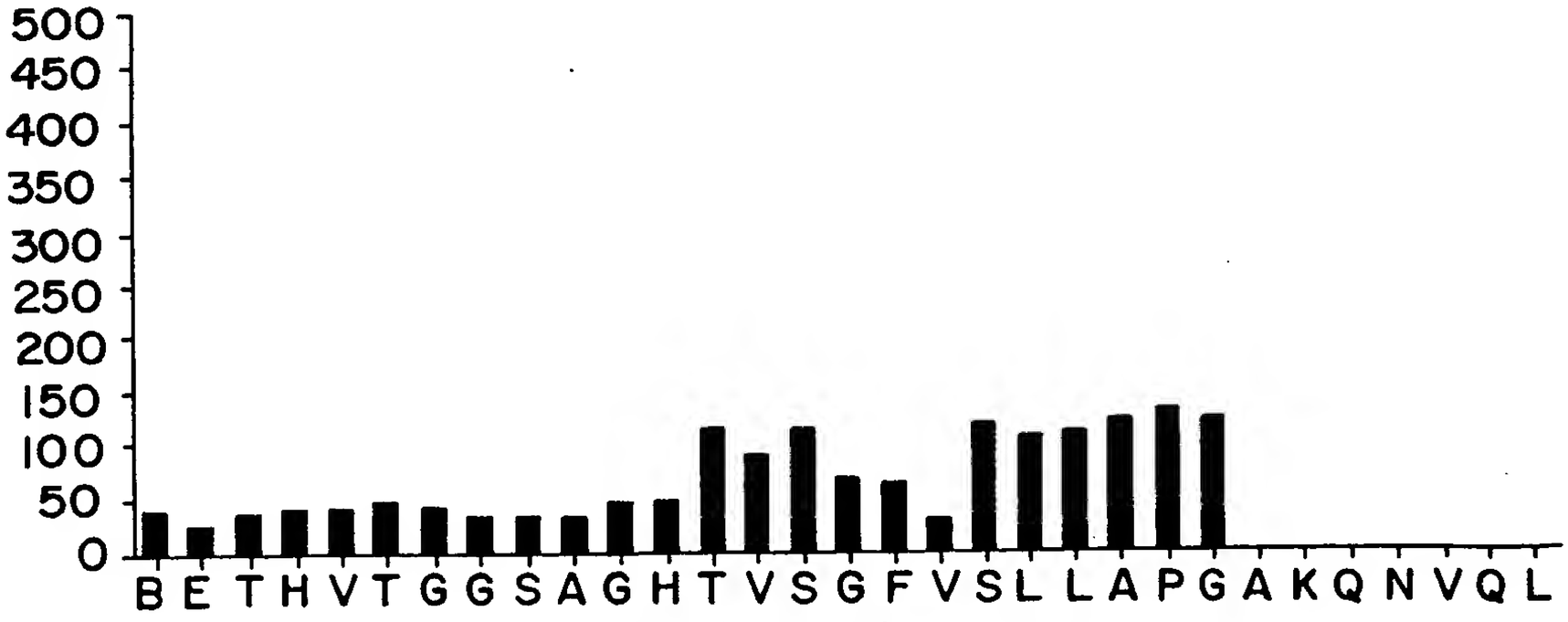

FIG.7C